

Mineral Industry Surveys

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SULFUR IN MARCH 2006

During the month, production of recovered elemental sulfur was 646,000 metric tons, according to the U.S. Geological Survey. March 2006 production was 4% higher than that of February 2006 and 17% lower than that of March 2005. Shipments were 4% higher than those of February 2006. Producers' ending stocks for March 2006 were 148,000 tons.

Sulfur production was significantly lower than it was in March 2005 for a few reasons. Sulfur production at petroleum refineries has not recovered to the level experienced before two major hurricanes struck the Gulf Coast in August and September 2005 and a few refineries were down for maintenance. Acid gas reinjection at a large natural gas operation in Wyoming reduced sulfur production from that source by about 30%. Production

from refineries is expected to recover, but recovery from natural gas operations is not predicted to increase significantly.

Import and export data for March 2006 were not available at the time of publication and will be published in the Sulfur in April 2006 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for February 2006 were estimated to be 233,000 tons; exports were 15,000 tons. Imports of sulfuric acid for February 2006 were 201,000 tons; exports were 38,000 tons.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks ³
	Petroleum ²	Natural gas	Total		
2005:					
January-December	6,900	1,810	8,710	8,690	XX
January-March	1,700	491	2,190	2,190	XX
March	584	169	753	754	183
April	597	157	754	755	168
May	620	159	780	768	177
June	618	158	775	772	178
July	619	153	772	772	175
August	647	163	810	811	175
September	486	141	627	631	165
October	475	136	611	611	158
November	551	129	679	668	172
December	584	120	705	712	160
2006:					
January	561	114 ^r	674 ^r	665 ^r	165 ^r
February	505	114 ^r	619 ^r	625 ^r	155 ^r
March ^p	534	112	646	648	148
Total	1,600	340	1,940	1,940	XX

^pPreliminary. ^rRevised. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes a small quantity from coking operations.

³Subject to inventory adjustments.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³	Quantity ^e	Value ³
2005:								
January-December	1,970	33,500	427	18,600	409	16,800	2,790	70,500
January-February	275	4,200	81	3,000	93	3,430	469	10,800
February	130	2,130	50	1,930	50	1,910	230	6,080
March	145	2,320	40	1,640	--	--	185	4,050
April	165	2,530	20	1,840	38	1,440	249	5,830
May	170	1,890	40	1,570	40	1,600	251	5,140
June	165	2,460	40	1,780	30	1,340	235	5,670
July	170	2,650	40	1,490	38	1,440	218	5,610
August	170	2,820	20	808	31	1,280	221	5,040
September	160	3,020	39	1,600	41	1,670	241	6,360
October	185	3,570	44	1,900	37	1,620	227	7,770
November	180	3,680	29	1,130	20	819	233	5,710
December	185	4,360	34	1,890	41	2,180	261	8,500
2006:								
January	165 ^r	4,190	58	2,520	37	1,680	260 ^r	8,460
February	150	3,910	43	1,810	40	1,650	233	7,450
Total	315	8,110	101	4,330	77	3,330	493	15,900

^eEstimated. ^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentaSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2005:									
January-December	2,000	656	80,700	398	129	7,920	2,660	871	102,000
January-February	347	114	12,200	85	28	1,610	461	151	17,300
February	174	57	6,190	39	13	745	213	70	7,820
March	183	60	7,080	39	13	696	254	83	8,590
April	191	63	7,770	25	8	497	250	82	9,660
May	158	52	6,370	34	11	606	192	63	7,080
June	144	47	5,360	26	8	445	189	62	6,380
July	168	55	6,840	9	3	187	213	70	7,790
August	156	51	6,490	19	6	350	196	64	9,150
September	169	55	6,890	35	11	626	241	79	8,260
October	178	58	7,880	60	20	1,730	253	83	11,600
November	138	45	5,910	38	12	674	181	59	6,820
December	172	56	7,910	28	9	504	229	75	9,640
2006:									
January	194	63	7,800	16	5	444 ^r	244	80	9,030
February	161	53	6,550	23	7	416	201	66	7,670
Total	355	116	14,300	39	12	860	445	146	16,700

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2005:					
January-December	683	55,900	338	108	29,500
January-February	94	6,770	41	13	3,820
February	72	5,040	28	9	2,230
March	41	6,270	31	10	2,270
April	94	6,010	51	17	3,280
May	16	1,850	26	8	2,560
June	56	5,920	38	12	3,630
July	64	4,520	24	8	1,920
August	71	5,330	25	8	2,600
September	42	3,470	26	8	2,810
October	104	7,070	32	10	3,020
November	14	2,940	7	2	992
December	87	5,790	37	12	2,560
2006:					
January	55	4,440	14 ^r	4	671
February	15	1,900	38	12	2,400
Total	70	6,340	52	16	3,070

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5
U.S. CONSUMPTION OF SULFUR¹

(Thousand metric tons)

Period	Domestic sources ²	Imports ^e	Consumption
2005:			
January-December	8,010	2,790	10,800
January-February	1,340	469	1,810
February	622	230	852
March	713	185	898
April	661	249	910
May	752	251	1,000
June	716	235	951
July	708	218	926
August	740	221	961
September	589	241	830
October	507	227	734
November	654	233	887
December	625	261	886
2006:			
January ^f	610	260	870
February	610	233	843
Total	1,220	493	1,710

^eEstimated. ^fRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT¹

(Thousand metric tons)

District and source	March 2006 ^p		February 2006		January - March 2006 ²		January - March 2005 ²	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	22	23	20	20	59	59	61	63
Natural gas	1	1	1	1	4	4	6	5
Total	22	21	22	21	63	63	67	68
PAD 2:								
Petroleum and coke	72	74	74	74	221	223	235 ^r	236 ^r
Natural gas	3	3	3	3	9	9	10	10
Total	76	77	77	77	230	232	245 ^r	246 ^r
PAD 3: ³								
Petroleum and coke	338	334	311	323	1,010	1,000	1,070 ^r	1,060 ^r
Natural gas	35	35	36	34 ^r	104	104	128 ^r	130
Total	373	369	347	357 ^r	1,110	1,110	1,200 ^r	1,190 ^r
PAD 4 and 5: ⁴								
Petroleum and coke	102	103	99	95 ^r	315	305	338 ^r	330 ^r
Natural gas	73	75	74 ^r	75 ^r	223	231	348 ^r	356 ^r
California	82	83	81	77	254	246	255 ^r	245 ^r
Total	175	178	174 ^r	170 ^r	538	536	686 ^r	685 ^r
Grand total	646	648	619 ^r	625 ^r	1,940	1,940	2,190	2,190

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions.

³Includes the U.S. Virgin Islands.

⁴Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2006			2005
	March	February	Total	total
Production	7.61 ^p	8.07 ^r	7.87 ^r	8.71
Shipments	7.63 ^p	8.15 ^r	7.86 ^r	8.69
Exports of sulfur	NA	0.20	0.43	0.58
Imports of sulfur:				
Canada	NA	1.96 ^e	1.95 ^e	1.97 ^e
Mexico	NA	0.56	0.62	0.45
Venezuela	NA	0.52 ^e	0.48 ^e	0.41 ^e
Total ²	NA	3.04 ^e	3.05 ^e	2.79 ^e
Export of H ₂ SO ₄	NA	0.50	0.32	0.31
Import of H ₂ SO ₄ :				
Canada	NA	2.10	2.20	1.87
Mexico	NA	0.30	0.24	0.40
Total ²	NA	2.62	2.75	2.66
Consumption: ³				
Domestic sources	NA	7.95	7.55	8.01 ^r
Imports	NA	3.04 ^e	3.05 ^e	2.79 ^e
Total	NA	10.99	10.60	10.80 ^r
Sulfur export values ⁴	NA	\$127	\$91	\$84
Sulfur import values: ⁴				
Canada	NA	\$26	\$26	\$17
Mexico	NA	\$42	\$43	\$41
Venezuela	NA	\$41	\$43	\$41
Average	NA	\$32	\$32	\$25
H ₂ SO ₄ export values ⁴	NA	\$63	\$59	\$86
H ₂ SO ₄ import values: ⁴				
Canada	NA	\$41	\$40	\$40
Mexico	NA	\$18	\$22	\$20
Average	NA	\$38	\$38	\$38

^eEstimated. ^pPreliminary. ^rRevised. NA Not available.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other countries not listed.

³Because March trade data were not available, March consumption was not determined.

⁴Average value per ton for most recent data available.